

REMARKS

Claims 30 and 37 were rejected over Roos (U.S. 6,403,746) in combination with Kinker (JP 08209179). Applicants point out that U.S. 5,696,066 corresponds with JP 08209179. Kinker, as it is referred to herein, references the corresponding U.S. patent.

Kinker discloses an additive for lubricating oils that includes a polymer. The first and second aspects of the Kinker invention are disclosed in at column 1, lines 28-41; reproduced below for convenience (underlining added):

In a first aspect of the present invention, a lubricating oil composition includes from 0.01 weight percent (wt.%) to 2 wt.% of a polymer, said polymer including repeating units each derived from a (C₈-C₁₅) alkyl (methyl)acrylate monomer, and from 98 wt.% to 99.99 wt.% of a vegetable oil or a polyolester....

In a second aspect of the present invention, a polymer includes from 70 weight percent (wt.%) to 99.5 wt.% first repeating units, each derived from a (C₈-C₁₅) alkyl(meth)acrylate monomer and from 0.5 wt.% to 30 wt.% second repeating units, each derived from a (C₁₆-C₂₄) alkyl(meth)acrylate monomer.

As is readily evident from the disclosure of Kinker quoted above, the prior art polymers must contain a substantial portion of a higher alkyl acrylate polymer, e.g., an alkyl acrylate polymer having an alkyl substituent with more than six carbon atoms. In the first aspect of the Kinker invention the prior art polymer is made from repeating monomer units that are “each derived” from an alkyl acrylate monomer that has at least a C₈ alkyl unit. In the second aspect of the Kinker invention, 70-99.5 wt.% of the prior art polymer must comprise acrylate monomers having a C₈ alkyl substituent and from 0.5-30 wt.% of second monomer units having at least a C₁₆ alkyl substituent. Thus, Kinker discloses compositions that include a polymer made from higher alkyl substituted acrylate monomer units. Kinker nowhere discloses or suggests the inclusion of any alkyl(meth)acrylate having an alkyl substituent with less than eight carbon atoms.

The Office acknowledged that Roos is silent as to the type of organic esters that may be present in the Roos compositions. The Office relied on Kinker as evidence that it would be obvious to use an oleate polyol ester in combination with the polymers of Roos. Kinker discloses the inclusion of a dioleate in the Kinker compositions in column 3, lines 44-55:

In a highly preferred embodiment, the polyol ester is neopentyl glycol dioleate, trimethylol propane trioleate, trimethylol propane triisostearate. When the polyol ester is trimethylol propane trioleate or neopentyl glycol dioleate, preferred polymers comprise from 90 wt.% to 99.9 wt.% first repeating units, each derived from a monomer selected from one or more of lauryl methacrylate, and myristyl methacrylate; and from 0.5 wt.% to 10 wt.% second repeating units, each derived from a monomer selected from one or more of cetyl methacrylate, stearyl methacrylate and eicosyl methacrylate.

Thus, Kinker discloses the use of an polyol oleate in combination with polymers made from acrylate monomers that has at least 90 wt.% of a higher alkyl substituent such as a lauryl or myristyl group.

Kinker does not disclose or suggest including any alkyl(meth)acrylate having an alkyl substituent with less than eight carbon units in the prior art polymer. Applicants submit that those of ordinary skill in the art would not be lead to the presently claimed invention by combining Kinker in with Roos. Kinker does not disclose or suggest the use of a polymer containing methylmethacrylate units or any other (C₁-C₆) alkyl(meth)acrylate monomer units in combination with a polyol ester such as an oleate.

Likewise, the examples of Roos disclose the preparation of a polymer made from a monomer mixture that includes a C₁₂-C₁₈ alkyl methacrylate in combination with a minor amount of methyl methacrylate. The methyl methacrylate is present in an amount of about 11% by weight based on the use of 29 grams of methyl methacrylate and 258.2 grams of the alkyl methacrylate (see Example 1 bridging cols. 14-15 of Roos).

For the reasons discussed above, Applicants submit that the Office's combination of Roos and Kinker to render the presently claimed invention obvious is does not make sense and is not appropriate in view of the fact that Kinker discloses the use of oleate esters in combination only with polymer compositions that contain a large majority amount of higher alkyl substituted alkyl(meth)acrylates monomer units (e.g., alkyl substituents having at least eight carbon units). Moreover, Roos and Kinker do not disclose or suggest that the polymers made from lower molecular weight alkyl substituted acrylates may be useful in polyolester compositions.

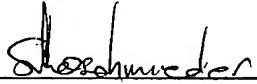
Applicants draw the Office's attention to new independent Claim 46. The new independent claim requires the presence of an organophosphorus compound. Applicants previously submitted a Declaration under 37 C.F.R. §1.131 proving a date of invention prior to the Liesen (2004/0092409) publication. Applicants submit that it is readily evident to those of skill in the art that TiBP (i.e., tri-iso-butyl phosphate) is an organophosphate and an organophosphorus compound.

Applicants submit that Claim 46 is patentable over the prior art of record as evidenced by Applicants' showing of a date of invention before the effective date of the Liesen publication as prior art.

For the reasons discussed above in detail, Applicants request withdrawal of the rejection and the passage of now-pending claims to allowance.

Respectfully submitted,

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